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10/542,213	02/24/2006	Henri Joseph Van Egmond	3135-052058	1748

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EXAMINER

NGUYEN, KHIEM D

ART UNIT

PAPER NUMBER

2823

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/542,213

**Applicant(s)**

VAN EGMOND ET AL.

**Examiner**

KHIEM D. NGUYEN

**Art Unit**

2823

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
- Paper No(s)/Mail Date 01/09/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Remarks***

1. Applicants' provisionally elect with traverse for further prosecution the invention of Group I, claims 13-21 filed on August 21<sup>st</sup>, 2008, is acknowledged. The traversal is on the ground(s) that "Under the unity of invention principles, the Applicants assert that Groups I and II relate to a single inventive concept because the technical relationship among the Groups involves the same or a corresponding special technical feature. This special technical feature is a carrier plate having holes allowing underpressure to be applied to hold the semiconductor product in place during and after separating the product using laser light". This is found persuasive and therefore, the restriction requirement mailed on July 21<sup>st</sup>, 2008 is hereby withdrawn. Claims 13-24 are being examining in this application.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Oath/Declaration***

3. The oath/declaration filed on February 24<sup>th</sup>, 2006 is acceptable.

### ***Claim Rejections - 35 USC § 102***

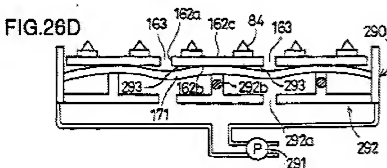
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 13-15 and 18-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kira et al. (U.S. Patent 6,885,522).

In re claim 13, Kira et al. disclose a carrier for supporting and engaging semiconductor products during separating of the products using laser light (see col. 12, lines 32-49 and FIGS. 11A-F), wherein the carrier comprises a plate **292** provided with a pattern of holes **292a** arranged in a flat carrying side of the plate **292**, and that the plate **292** is manufactured from a material at least substantially not absorbing the laser light (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).



In re claim 14, as applied to claim 13 above, Kira et al. disclose all claimed limitations including the limitation wherein plate **292** is manufactured from glass or ceramic (see col. 17, lines 45-58).

In re claim 15, as applied to claim 13 above, Kira et al. disclose all claimed limitations including the limitation wherein the cross-section through the

holes **292a** close to the carrying side of the plate **292** is larger than at a distance from the carrying side (see FIGS. 26A-E).

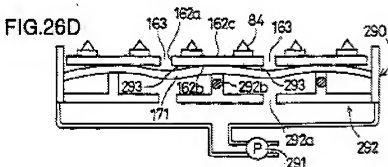
In re claim 18, Kira et al. disclose a holder for supporting and engaging semiconductor products during separating of the products using laser light, comprising a carrier **292** as claimed in claim 13, and means **290, 291** for generating underpressure connecting onto the side of the plate **292** remote from the carrying side (see col. 18, lines 47-63 and FIGS. 26A-E).

In re claim 19, as applied to claim 18 above, Kira et al. disclose all claimed limitations including the limitation wherein the means **290, 291** for generating underpressure connecting onto the side of the plate **292** remote from the carrying side are formed by a chamber connecting onto the carrier and an extractor connecting onto the chamber (see col. 18, lines 47-63 and FIGS. 26A-E).

In re claim 20, as applied to claim 18 above, Kira et al. disclose all claimed limitations including the limitation wherein the chamber is also provided with positioning means for the carrier (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

In re claim 21, Kira et al. disclose a laser cutting device for supporting and engaging semiconductor products **161** during separating of the products using laser light, provided with a holder as claimed in claim 18, wherein the laser source **180, 181** is located on the carrying side of the plate **292** (see col. 12, lines 32-49 and FIGS. 11A-F).

In re claim 22, Kira et al. disclose a method for supporting and engaging semiconductor products during separating of the products using laser light, comprising the processing steps of: A) placing an assembly of semiconductor products **161** for separating onto a flat plate **292** provided with a pattern of holes **292a**, B) applying an underpressure to the holes **292a** of the pattern of holes such that the assembly of semiconductor products **161** is drawn against the plate **292**, C) directing at least one laser beam **180**, **181** onto the assembly and cutting through the assembly **161** where this is desired by means of mutual displacement of the laser source **180**, **181** and the flat plate **292** such that each severed semiconductor product **162** is still connected to at least one hole **292a** in the flat plate **292**, and D) taking the separated products **162** from the plate **292** (see col. 12, lines 32-49 and FIGS. 11A-F) and (col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).



In re claim 23, as applied to claim 22 above, Kira et al. disclose all claimed limitations including the limitation wherein the underpressure on the holes **292a** is at least partly relieved before the separated products **161** are

removed from the plate **292** (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

In re claim 24, as applied to claim 22 above, Kira et al. disclose all claimed limitations including the limitation wherein the assembly of semiconductor products **161** is drawn against the plate **292** during processing step B) such that possible deviations in the flatness in the contact side of the assembly are removed by the suction of the plate **292** (see col. 18, line 47 to col. 19, line 15 and FIGS. 26A-E).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kira et al. (U.S. Patent 6,885,522).

In re claims 16 and 17, as applied to claim 13 Paragraph 5 above, Kira et al. disclose in (FIGS. 26A-E) wherein holes **292a** having a predetermined top angle and wherein the pattern hole holes is grid-shaped but is silent about wherein the holes **292a** have a top angle between 15° and 45°, preferably a top angle of 30° and the pitch between the holes is greater than 200 μm.

However, there is no evidence indicating the top angle range of the holes and the pitch between the holes is critical and it has been held that it is not

inventive to discover the optimum or workable range of a result-effective variable within given prior art conditions by routine experimentation. See MPEP § 2144.05. Note that the specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising there from. Where patentability is aid to be based upon particular chosen dimensions or upon another variable recited in a claim, the Applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHIEM D. NGUYEN whose telephone number is (571)272-1865. The examiner can normally be reached on Monday-Friday (8:30 AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kiem D. Nguyen/  
Examiner, Art Unit 2823

/K. D. N./  
Examiner, Art Unit 2823